WM-EX48

SERVICE MANUAL

US Model
AEP Model

Model Name Using Similar Mechanism	**WM-EX50**
Tape Transport Mechanism	**MT-WMEX50-01**

WM-EX48 mechanical and electrical specifications are almost same as WM-EX50 model.
Please refer to WM-EX50/FX50 service manuals (9-956-418-11) for the information not contained in this manual.

SPECIFICATIONS

Power requirements 1.5V DC
One R6 (size AA) battery
DC 1.5V jack accepts
Sony AC-E15L AC power adaptor (not supplied)
for use on:
US Model : 120V AC, 60 Hz
AEP Model : 220V AC, 50 Hz

Battery life (on tape playback)

Sony SUM-3 (NS)	Approx. 2hours
Sony alkaline AM3 (N)	Approx. 7hours
Sony NC-5WM	Approx. 3hours
Sony NC-6WM	Approx. 3hours

Dimension Approx. 78.4 × 107.8 × 30.5mm (w/h/d) incl. projectiong parts and controls.

Weight Approx. 195g (6.9 oz) incl. a battrey

Accsessories supplied ○ : supplies × : not supplied

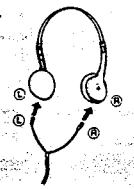
	Stereo headphones	Stereo earphones	Ear adaptors	Carrying Case
AEP model	×	○	○	○
US model	○	×	×	×

Design and specifications are subject to change without notice.

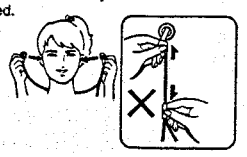
Note

This appliance conforms with EEC Directive 87/308EEC regarding interference suppression.

Note on headphone cord (US Model)
The cord of the headphones is detachable. If the cord becomes detached, reconnect it as illustrated.



Notes on stereo earphones (AEP Model)
- Put the cord behind your neck. The knot cannot be moved.



- If the earphones do not fit your ears, attach the ear adaptors (supplied).

STEREO CASSETTE PLAYER

SONY

MICROFILM

9-957-092-11

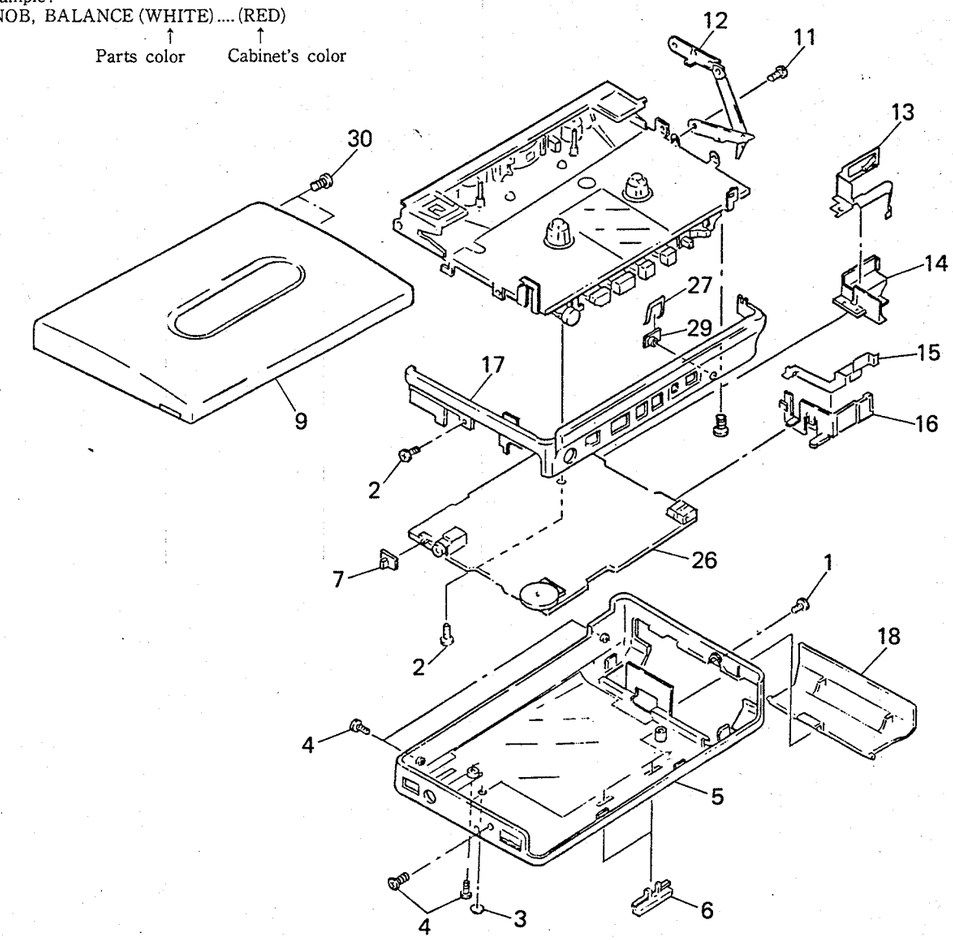
Sony Corporation
General Audio Group

English
92C0280-1
Printed in Japan
©1992.3
Published by Customer Relations and Service Group

SECTION 1
EXPLODED VIEW

NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE).... (RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

When indicating parts by reference number, please include the board.



Ref.No.	Part No.	Description	Remark
1	3-704-197-13	SCREW (M1.4X2.0), LOCKING	
2	3-704-197-11	SCREW (M1.4X2.0), LOCKING	
3	3-342-380-01	SHEET, SPEED HOLE (BLACK)	
3	3-368-118-01	SHEET, SPEED HOLE (GRAY)(AEP)	
4	3-704-197-53	SCREW (M1.4X3.5), LOCKING	
5	X-3364-905-1	CABINET (REAR) ASSY (BLACK)	
5	X-3364-906-1	CABINET (REAR) ASSY (GRAY) (AEP)	
6	3-352-045-01	KNOB (TAPE), (DOLBY NR)	
7	3-348-186-01	KNOB (DBB)	
9	X-3364-903-1	PANEL ASSY, CASSETTE (BLACK)	
9	X-3364-904-1	PANEL ASSY, CASSETTE (GRAY) (AEP)	
11	3-704-197-03	SCREW (M1.4X1.6), LOCKING	
12	X-3352-013-1	ARM ASSY, CLICK	
13	3-357-914-01	TERMINAL BOARD, MINUS	
14	3-352-050-01	HOLDER (B), TERMINAL	
15	3-352-047-01	TERMINAL BOARD, PLUS	
16	3-352-049-01	HOLDER (A), TERMINAL	
17	3-367-812-01	ORNAMENTAL, REEL	
18	3-367-803-01	LID, BATTERY CASE (GRAY) (AEP)	
18	3-367-803-11	LID, BATTERY CASE (BLACK)	
* 26	A-3016-203-A	AUDIO BOARD, COMPLETE	
27	3-367-804-01	SPRING, CASSETTE RETAINER	
* 29	3-368-117-01	SPACER	
30	3-704-197-03	SCREW (M1.4X1.6)	

• DIFFERENT PARTS LIST

No.	DESCRIPTION	WM-EX50	WM-EX48	Page of WM-EX50/FX50 Service manual
26	PC BOARD ASSY, AUDIO	*A-3016-051-A	*A-3016-203-A	23
C601, C604, C606	CERAMIC CHIP 0.01MF 50V	1-164-232-11	————	24
	CERAMIC CHIP 0.082MF 25V	————	1-164-345-11	
R601	METAL CHIP 330 5% 1/16W	1-216-815-11	————	25
	METAL GLAZE 390 5% 1/16W	————	1-216-816-11	
	ACCESSORY & PACKING MATERIAL			28
	INDIVIDUAL CARTON (US)	*3-367-384-01	*3-376-776-01	
	INDIVIDUAL CARTON (AEP)	*3-367-390-01	*3-376-777-01	
	MANUAL INSTRUCTION (INGLISH) (US)	3-753-019-21	3-754-975-21	
	MANUAL INSTRUCTION (AEP) (GERMAN, DUTCH, SWEDISH, ITALIAN)	3-753-019-41	3-754-975-41	
	MANUAL INSTRUCTION (AEP) (INGLISH, FRENCH, SPANISH, PORTUGUESE)	3-753-019-51	3-754-975-11	
	HEADPHONE MDR-E14 SET (US)	8-953-341-90	8-953-415-90	
	HEADPHONE MDR-E552 SET (AEP)	8-953-400-90	————	
	HEADPHONE MDR-E551 SET (AEP)	————	8-953-485-90	

NOTE:
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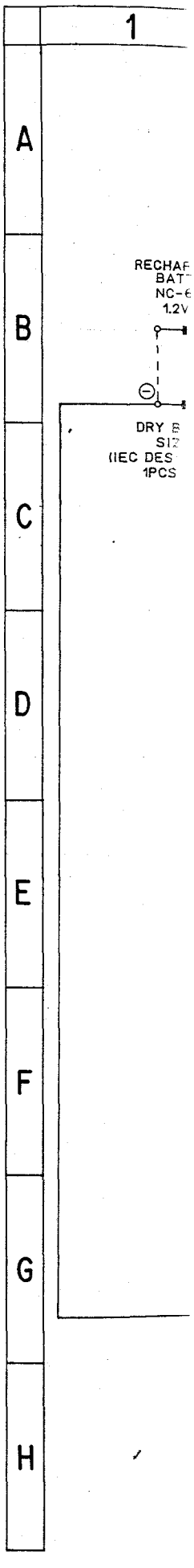
SECTION 2
DIAGRAMS

2-1. PRINTED WIRI

• SEMICONDUCTOR LOCATION

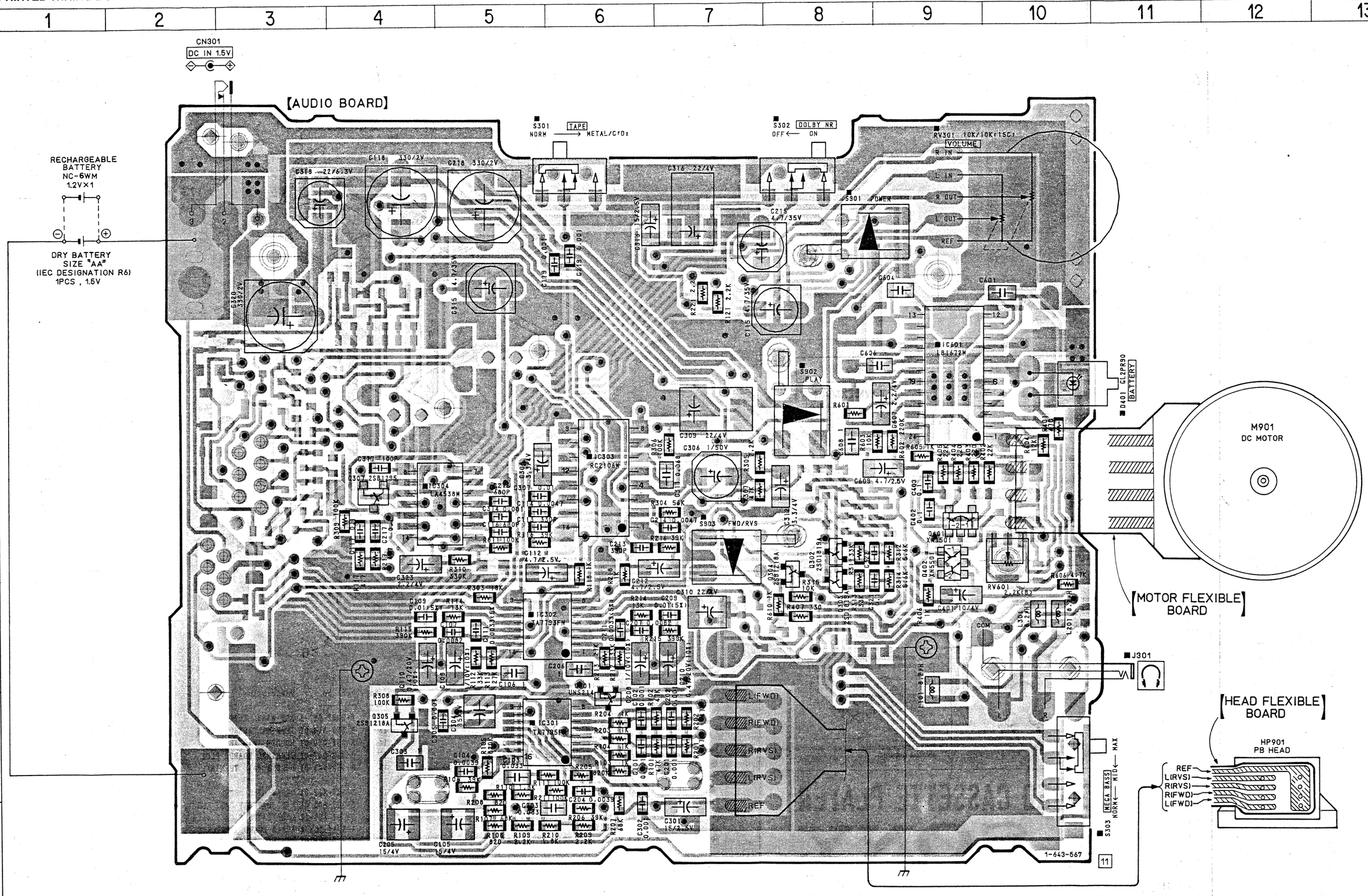
Ref. No.	Location
D401	D – 11
IC301	G – 5
IC302	F – 5
IC303	D – 6
IC304	E – 4
IC601	C – 9
Q301	G – 6
Q302	E – 8
Q303	F – 8
Q304	E – 8
Q305	G – 4
Q307	E – 4
Q401	E – 9
Q402	E – 9



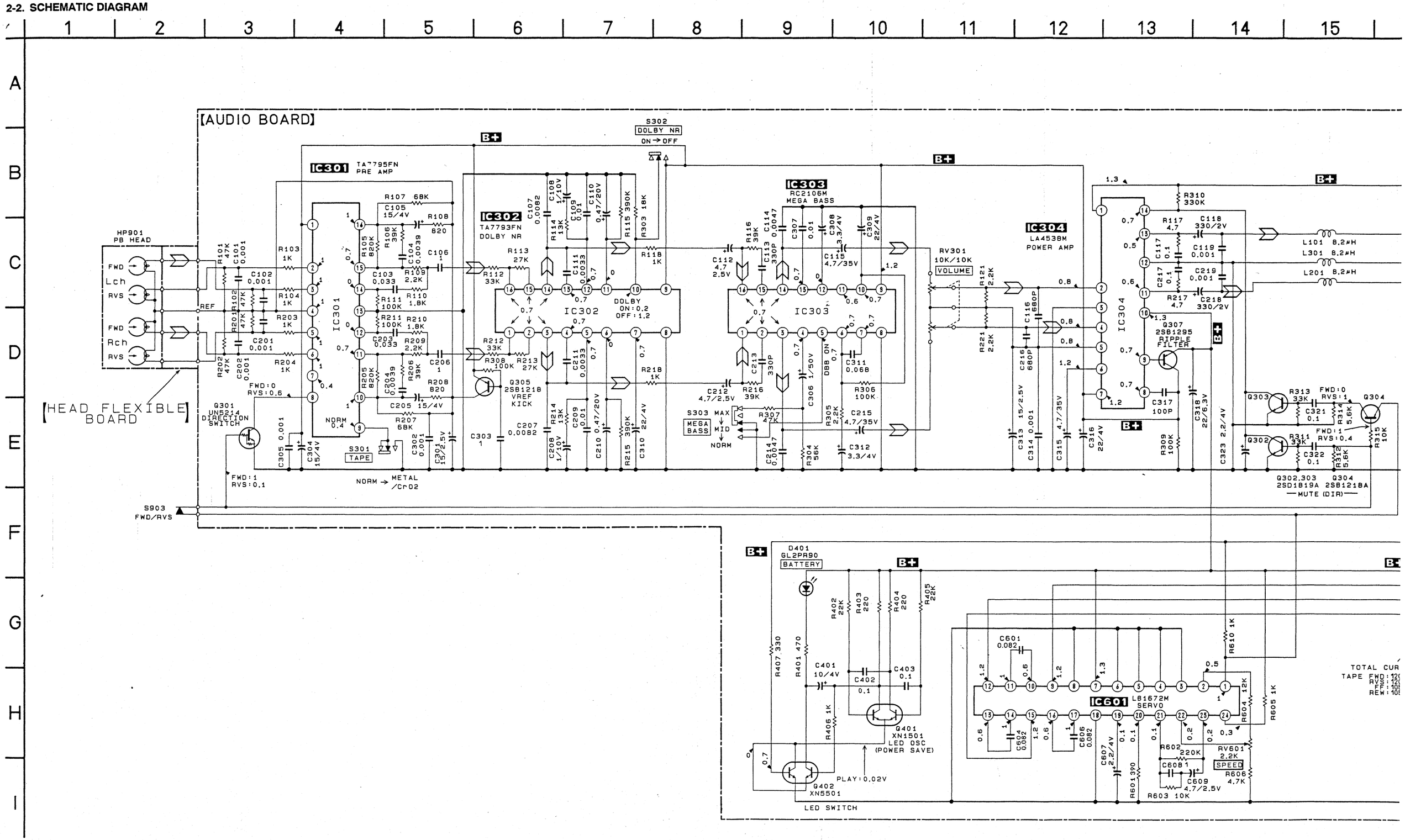
Note :

- O— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.
- □ : Chip components extracted from the rear side.

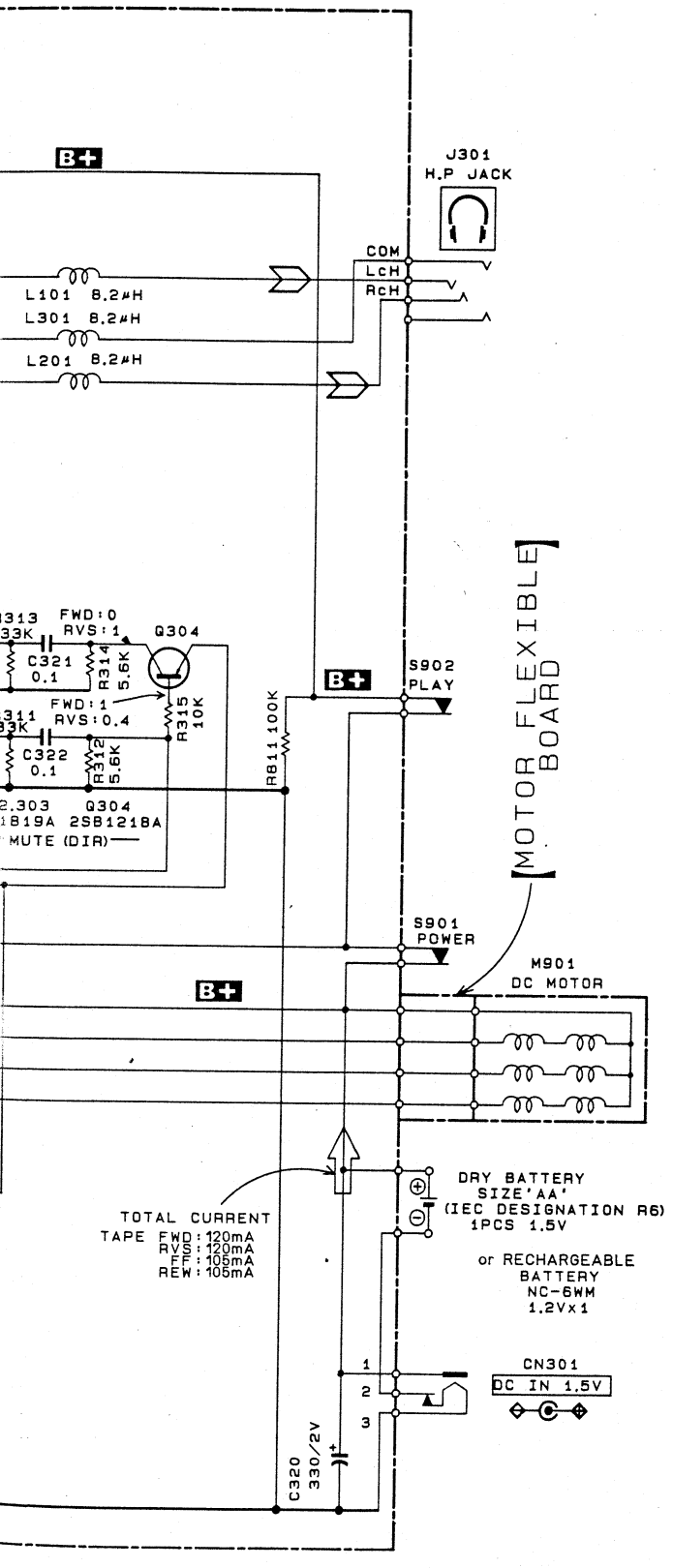
2-1. PRINTED WIRING BOARDS



2-2. SCHEMATIC DIAGRAM



15 | 16 | 17



Note :

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- B+ : B+ Line
- ▭ : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 1.5V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark : PLAY (FWD)
  ( ) :
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⊃ : PB (FWD)